

36. (Amended) A process comprising

(a) preparing an aqueous mixture containing a pesticidal agent, a pH-dependent polymer, a base, optionally a plasticizer, optionally an ultraviolet protector, optionally an activity enhancer, optionally a glidant, and water;

wherein the polymer

- (1) contains ester groups and free carboxylic acid groups,
- (2) is partially solubilized due to the action of the base, and
- (3) has solubilization pH greater than about pH 5.5;

wherein the mixture's pH is less than the polymer's solubilization and pH; and

(b) drying the mixture to produce a pesticidal matrix.

37. (Amended) A process as described in Claim 36, wherein in the mixture, after the base and polymer's acid groups have interacted, less than about 10% of the acid groups have been converted to salts.

38. (Amended) A process as described in Claim 37, wherein the polymer is essentially insoluble below about pH 5.5.

39. (Amended) A process as described in Claim 38, wherein the polymer is soluble above about pH 7.

40. (Amended) A process as described in Claim 39, wherein the base is present in an amount less than that required to fully solubilize the polymer.

41. (Amended) A process as described in Claim 40, wherein the base is a hydroxide compound.

42. (Amended) A process as described in Claim 41, wherein the compound is selected from the group consisting of ammonium hydroxide, an alkali metal hydroxide, an alkaline earth metal hydroxide, and mixtures thereof.

43. (Amended) A process as described in Claim 42, wherein the compound is ammonium hydroxide.

44. (Amended) A process as described in Claim 36, wherein the mixture does not contain the plasticizer, the ultraviolet protector, the activity enhancer, and the glidant.

45. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer.

46. (Amended) A process as described in Claim 36, wherein the mixture contains the ultraviolet protector.

47. (Amended) A process as described in Claim 36, wherein the mixture contains the activity enhancer.

48. (Amended) A process as described in Claim 36, wherein the mixture contains the glidant.

49. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer and the ultraviolet protector.

50. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer and the activity enhancer.

51. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer and the glidant.

52. (Amended) A process as described in Claim 36, wherein the mixture contains the ultraviolet protector and the activity enhancer.

53. (Amended) A process as described in Claim 36, wherein the mixture contains the ultraviolet protector and the glidant.

54. (Amended) A process as described in Claim 36, wherein the mixture contains the activity enhancer and the glidant.

55. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer, the ultraviolet protector, and the activity enhancer.

56. (Amended) A process as described in Claim 36, wherein the mixture contains the ultraviolet protector, the activity enhancer, and the glidant.

57. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer, the activity enhancer, and the glidant.

58. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer, the ultraviolet protector, and the glidant.

59. (Amended) A process as described in Claim 36, wherein the mixture contains the plasticizer, the ultraviolet protector, the activity enhancer, and the glidant.

60. (Amended) A process as described in Claim 36, wherein the pesticidal agent is selected from the group consisting of an insecticide, an acaricide, a nematicide, a fungicide, a herbicide, and mixtures thereof.

61. (Amended) A process as described in Claim 60, wherein the pesticidal agent is an insecticide selected from the group consisting of a chemical insecticide, a biological insecticide, and mixtures thereof.

63. (Amended) A process as described in Claim 61, wherein the insecticide is a biological insecticide.

64. (Amended) A process as described in Claim 63, wherein the biological insecticide is a naturally-occurring or a genetically-modified variety of an insect biological control agent.

65. (Amended) A process as described in Claim 64, the insect biological control agent is selected from the group consisting of a viral pathogen, a bacterial pathogen, a fungal pathogen, and mixtures thereof.

66. (Amended) A process as described in Claim 65, wherein the insect biological control agent is a viral pathogen selected from the group consisting of a DNA virus, a RNA virus, an unclassified insect virus, and mixtures thereof.

67. (Amended) A process as described in Claim 66, the viral pathogen in a DNA virus selected from the group consisting of a double stranded enveloped DNA virus, a double stranded nonenveloped DNA virus, a single stranded DNA virus, and mixtures thereof.

68. (Amended) A process as described in Claim 67, wherein the DNA virus is a double stranded enveloped DNA virus selected from the group consisting of *Entomopoxvirinae* and *Eubaculovirinae*.

69. (Amended) A process as described in Claim 68, wherein the double stranded enveloped DNA virus is *Entomopoxvirinae*.

70. (Amended) A process as described in Claim 69, wherein the double stranded enveloped DNA virus *Entomopoxvirinae* is an entomopox virus (EPV) selected from the group consisting of *Melolontha melolontha* EPV, *Amsacta mopei* EPB, *Locusta migratoria* EPV, *Melanoplus sanguinipes* EPV, *Schistocerca gregaria* EPV, *Aedes aegypti* EPV, *Chironomus luridus* EPV, and mixtures thereof.

71. (Amended) A process as described in Claim 68, wherein the double stranded enveloped DNA virus is *Eubaculovirinae*.

72. (Amended) A process as described in Claim 71, wherein the double stranded enveloped DNA virus *Eubaculovirinae* is selected from the group consisting of

(1) a nuclear polyhedrosis virus (NPV) of *Lymantria dispar* NPV, *Anagrapha falcifera* NPV, *Spodoptera littoralis* NPV, *Mamestra brassicae* NPV, *Choristoneura fumiferana* NPV, *Trichoplusia ni* NPV, *Heliocoverpa zea* NPV, *Rachiplusia ou* NPV, an *Autographa californica* NPV selected from the group consisting of V8vEGTDEL, V8vEGTDEL-AaIT, AcMNPV E2, AcMNPV L1, AcMNPV V8, AcMNPV Px1, and mixtures thereof; and

(2) a granulosis virus (GV) of *Cydia pomonella* GV, *Pieris brassicae* GV, *Trichoplusia ni* GV, *Artogeia rapae* GV, *Plodia interpunctella* GV, and mixtures thereof.

73. (Amended) A process as described in Claim 67, wherein the DNA virus is a double stranded nonenveloped DNA virus.

74. (Amended) A process as described in Claim 67, wherein the DNA virus is a single stranded nonenveloped DNA virus.

75. (Amended) A process as described in Claim 66, wherein the viral pathogen is a RNA virus selected from the group consisting of a double stranded enveloped RNA virus, a double stranded nonenveloped RNA virus, a single stranded RNA virus, and mixtures thereof.

76. (Amended) A process as described in Claim 75, wherein the RNA virus is a double stranded enveloped RNA virus selected from the group consisting of *Togaviridae*, *Bunyaviridae*, *Flaviviridae*, and mixtures thereof.

77. (Amended) A process as described in Claim 75, wherein the RNA virus is a double stranded nonenveloped RNA virus selected from the group consisting of *Reoviridae*, *Birnaviridae*, and mixtures thereof.

78. (Amended) A process as described in Claim 75, wherein the RNA virus is a single stranded nonenveloped RNA virus selected from the group consisting of *Picornaviridae*, *Tetraviridae*, *Nodaviridae*, and mixtures thereof.

81. (Amended) A process as described in Claim 36, wherein

- (a) the polymer is selected from the group consisting of an ethyl acrylate/methacrylic acid copolymer, a methyl methacrylate/methacrylic acid copolymer, a methacrylic acid/methyl acrylate/methyl methacrylate copolymer, and mixtures thereof;
- (b) the plasticizer is selected from the group consisting of a poly(ethylene glycol), a poly(propylene glycol), a citric acid ester, diethyl phthalate, dibutyl phthalate, castor oil, triacetin, and mixtures thereof;
- (c) the ultraviolet protector is selected from the group consisting of carbon black, a benzophenone, a dye, titanium dioxide, and mixtures thereof;
- (d) the activity enhancer is a stilbene compound; and
- (e) the glidant is selected from the group consisting of talc, magnesium stearate, calcium stearate, calcium sulfate, and mixtures thereof.

82. (Amended) A process as described in Claim 36, wherein

- (a) the polymer is selected from the group consisting of an ethyl acrylate/methacrylic acid copolymer having free carboxylic acid groups and ester groups in a ratio of about 1:1, a methyl methacrylate/methacrylic acid copolymer having free carboxylic acid groups and ester groups in a ratio of from about 1:1 to about 1:2, a methacrylic acid/methyl acrylate/methyl methacrylate copolymer having monomers in a ratio of from about 1:5:2 to about 3:7:3, and mixtures thereof;

- (b) the plasticizer is selected from the group consisting of triethyl citrate and a poly(ethylene glycol) having an average molecular weight of about 1,000 to 10,000; and
- (c) the stilbene compound is selected from the group consisting of Blancophor BBH, Calcofluor White M2R, Phorwite AR, and mixtures thereof.

83. (Amended) A process as described in Claim 36, wherein the polymer is a methyl methacrylate/methacrylic acid copolymer.

84. (Amended) A process as described in Claim 36, wherein the mixture is spray dried.

85. (Amended) A process as described in Claim 36, wherein the matrix has a particle size of less than about 20  $\mu\text{m}$ .

86. (Amended) A process as described in Claim 36, wherein the matrix has a particle size of from about 2  $\mu\text{m}$  to about 10  $\mu\text{m}$ .

87. (Amended) A process as described in Claim 36, wherein the matrix comprised, on a percentage-weight-basis, from about 1% to about 50% of the pesticidal agent, from about 5% to about 50% of the polymer, from about 0% to about 25% of the plasticizer, from about 0% to about 30% of the ultraviolet protector, from about 0% to about 75% if the activity enhancer, and from about 0% to about 15% of the glidant.

88. (Amended) A pesticidal matrix comprising

- (a) on a percentage-weight-basis, from about 1% to about 50% of a pesticidal agent, from about 5% to about 50% of a pH-dependent polymer, from about 0% to about 25% of a plasticizer, from about 0% to about 30% of a ultraviolet protector, from about 0% to about 75% of a activity enhancer, and from about 0% to about 15% of a glidant; and
- (b) wherein the polymer
- (1) contains ester groups and free carboxylic acid groups,
  - (2) is partially solubilized due to the action of a base, and

(3) has a solubilization pH greater than about pH 5.5.

89. (Amended) A pesticidal matrix as described in Claim 88, wherein the matrix comprises, on a percentage-weight-basis, from about 5% to about 35% of the pesticidal agent, from about 10% to about 45% of the polymer, from about 0% to about 25% of the plasticizer, from about 0% to about 20% of the ultraviolet protector, from about 0% to about 45% of the activity enhancer, and from about 0% to about 10% of the glidant.

90. (Amended) A pesticidal matrix as described in Claim 88, wherein

- (a) the polymer is selected from the group consisting of an ethyl acrylate/methacrylic acid copolymer, a methyl methacrylate/methacrylic acid copolymer, a methacrylic acid/methyl acrylate/methyl methacrylate copolymer, and mixtures thereof;
- (b) the plasticizer is selected from the group consisting of a poly(ethylene glycol), a poly(propylene glycol), a citric acid ester, diethyl phthalate, dibutyl phthalate, castor oil, triacetin, and mixtures thereof;
- (c) the ultraviolet protector is selected from the group consisting of carbon black, a benzophenone, a dye, titanium dioxide, and mixtures thereof;
- (d) the activity enhancer is a stilbene compound; and
- (e) the glidant is selected from the group consisting of talc, magnesium stearate, calcium stearate, calcium sulfate, and mixtures thereof.

91. (Amended) A pesticidal matrix as described in Claim 90, wherein

- (a) the polymer is selected from the group consisting of an ethyl acrylate/methacrylic acid copolymer having free carboxylic acid groups and ester groups in a ratio of about 1:1, a methyl methacrylate/methacrylic acid copolymer having free carboxylic acid groups and ester groups in a ratio of from about 1:1 to about 1:2, a methacrylic acid/methyl acrylate/methyl methacrylate copolymer having monomers in a ratio of from about 1:5:2 to about 3:7:3, and mixtures thereof;
- (b) the plasticizer is selected from the group consisting of triethyl citrate and a poly(ethylene glycol) having an average molecular weight of about 1,000 to 10,000; and

(c) the stilbene compound is selected from the group consisting of Blancophor BBH, Calcofluor White M2R, Phorwite AR, and mixtures thereof.

92. (Amended) A pesticidal matrix as described in Claim 88, wherein the pesticidal agent is selected from the group consisting of an insecticide, an acaricide, a nematocide, a fungicide, a herbicide, and mixtures thereof.

93. (Amended) A pesticidal matrix as described in Claim 92, wherein the pesticidal agent is an insecticide selected from the group consisting of a chemical insecticide, a biological insecticide, and mixtures thereof.

95. (Amended) A pesticidal matrix as described in Claim 93, wherein the insecticide is a biological insecticide selected from the group consisting of a viral pathogen, a bacterial pathogen, a fungal pathogen, and mixtures thereof.

96. (Amended) A pesticidal matrix as described in Claim 95, wherein

(a) the biological insecticide is selected from the group consisting of

- (1) *Melolontha melolontha* EPV, *Amsacta moorei* EPB, *Locusta migratoria* EPV, *Melanoplus sanguinipes* EPV, *Schistocerca gregaria* EPV, *Aedes aegypti* EPV, *Chironomus luridus* EPV, and mixtures thereof;
- (2) *Lymantria dispar* NPV, *Anagrapha falcifera* NPV, *Spodoptera littoralis* NPV, *Mamestra brassicae* NPV, *Choristoneura fumiferana* NPV, *Trichoplusia ni* NPV, *Heliocoverpa zea* NPV, *Rachiplusia ou* NPV, an *Autographa californica* NPV selected from the group consisting of V8vEFTDEL, V8vEGTDEL-AaIT, AcMNPV E2, AcMNPV L1, AcMNPV V8, AcMNPV Px1, and mixtures thereof;
- (3) *Cydia pomonella* GV, *Pieris brassicae* GV, *Trichoplusia ni* GV, *Artogeia rapae* GV, *Plodia interpunctella* GV, and mixtures thereof;
- (4) *Togaviridae*, *Bunyaviridae*, *Flaviviridae*, and mixtures thereof;
- (5) *Reoviridae*, *Birnaviridae*, and mixtures thereof;
- (6) *Picornaviridae*, *Tetnaviridae*, *Nodaviridae*, and mixtures thereof;

- (7) *Bacillus thuringiensis*, *Bacillus lentimorbus*, *Bacillus cereus*, *Bacillus popilliae*, *Photorhabdus luminescens*, *Xeorhabdus nematophilus*, and mixtures thereof; and
- (8) *Beauveria bassiana*, *Entomophthora* spp., *Metarrhizium anisopliae*, and mixtures thereof.

97. (Amended) A pesticidal matrix produced by a process as described in Claim 1.

98. (Amended) A process for improving the residual control of a pest comprising applying to the locus of the pest a pesticidally-effective amount of a pesticidal matrix as described in Claim 97.

#### Remarks

Entry of this amendment and favorable reconsideration of this application taking into account the remarks below is respectfully requested. Amendments to the claims have been made to place the application in condition for allowance.

Claims 62, 79, 80, and 94 have been canceled with out prejudice as being drawn to non-elected subject matter

Claims 36-61, 63-78, 81-93, 95-98 are rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, i.e., that a "general claim to any polymer without specifying minimum, and maximum 10% solubilization, and ratio of ester/acid is beyond the scope of the specification." This rejection is respectfully traversed.

The specification calls for a pH-dependent polymer that is insoluble when the coated pesticidal matrix is applied to the locus of a pest and soluble within the target pest, see page 8, lin27 to page 9, line 2. By this description the specification supports any polymer with these attributes. One example of such a polymer is the methacrylate/methacrylic acid polymers disclosed in the specification but other polymers functioning in the same manner are also contemplated. Reconsideration is respectfully requested.